Region 1 FY 2015 Invasive Species Control Program Proposal

Refuge/complex name: Hanford Reach National Monument/Mid-Columbia River NWR Complex

Project title: Ringold Russian Knapweed Treatment

Total amount requested: $30,000

Project description:
Increase the diversity of the seed mix on approximately 250 acres in the Ringold Unit of the Hanford Reach National Monument (Monument) treated with aminopyralid as part of an Integrated Pest Management (IPM) plan to replace the Russian knapweed (*Acroptilon repens/Rhaponticum repens*), a Class B noxious weed in Washington State, which has existed as a virtual monoculture in these locations.

This proposal will allow the Monument to plant additional native grass species for long term control of a virtual monoculture of Russian knapweed (knapweed) in the northern portion of the Ringold Unit which was treated with herbicide in the fall of 2014. The funding will allow the addition of three (3) early seral native grass species (Sand dropseed (*Sporobolus cryptandrus*), Sandberg's bluegrass (*Poa secunda*), and Inland saltgrass (*Distichlis spicata*)) to complement the slower growing replacement grasses the Monument has already purchased. This component of the treatment will take advantage of the competition provided by these three species to control the bulbous bluegrass (*Poa bulbosa L.*) and cheatgrass (*Bromus tectorum*) in the area but not present in the knapweed monoculture.

Distinct project with well-defined objectives (10 points):
The Monument (Mid-Columbia River NWR Complex) treated these areas of knapweed in the fall of 2014 and plans to burn them in the fall of 2015, followed by reseeding in the early winter 2015/16. This delay is required to allow for herbicide degradation and optimal burn windows as well as allowing seeding activities to take place when conditions are favorable for shrub steppe planting. Basin wildrye (*Leymus cinereus*), thickspike wheatgrass (*Elymus lanceolatus*), and bluebunch wheatgrass (*Pseudoroegneria spicata*) seed have already been purchased. The addition of the early seral species will provide competition to control invasion by bulbous bluegrass (*Poa bulbosa L.*) and cheatgrass (*Bromus tectorum*), which are already present in the vicinity, and includes a salt tolerant species to provide competitive cover in the more allelopathic areas associated with these high density knapweed stands.

Comment [BF1]: I can really appreciate the rationale here. These seems like a important element to an IPM approach to invasive species prevention and control. It's outside the box, but it still manages to fit the mold.

Potential for maximum control/Likelihood of success (10 points):
The project goal is removal of high density stands of knapweed and replacement with a native grass community which is able to compete with the Knapweed and keep out or otherwise reduce the occurrence and cover of bulbous bluegrass and cheatgrass. Based upon past experience, the chances of control/success for the project would be greatly enhanced with the addition of these early seral species which will provide native competition to invasive grasses currently present in the area.

Biological benefit to priority species or BIDEH (10 points):
One of the primary purposes of the Monument as stated in Presidential Proclamation 7319 ("Establishment of the Hanford Reach National Monument") and in the Final Comprehensive Conservation Plan is to protect and restore shrub-steppe ecosystems. Russian knapweed is a non-native invasive plant that causes severe degradation of shrub-steppe. Removal of the knapweed and establishment of self-functioning native plants by definition supports the primary purpose of the Monument.

Comment [BF2]: How? Maybe I need to revise this question yet again…

Sustainability (10 points):
All activities proposed under this project should be completed within the fiscal year. Monitoring and follow-up treatments may be necessary for 1-2 years, with levels of effort and costs dependent on results. Results are expected to be good, so future efforts and costs are not anticipated to be great. In addition, once grasses are established, treatments of any future knapweed plants in these areas may be done with little or no effect on the grasses.

Monitoring to document and evaluate project success (10 points):
The knapweed infestation has been mapped over time from multiple aerial imagery datasets, as well as with GPS-mapping and ground-truthing. Long-term monitoring will include revisiting this re-vegetation area to assess the status of the control activities and GPS/GIS mapping of the treatment and remaining infestations.

Annual monitoring will be accomplished through direct observation of treated infestations. New infestations (should they occur) will be GPS'ed using hand-held Trimble® units and a customized data dictionary in TerraSync®. These GPS files will be imported into the Complex's GIS for long-term documentation and monitoring. Treated sites will be revisited in subsequent years and spot retreatments will be made as needed. Photopoints will be established and revisited to document change over time, and new photopoints will be established as necessary.

Budget: $30,000
Requested funds would cover the cost of native grass seed.

All other costs associated with this project are being covered by the Mid-Columbia River NWR Complex.

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